AT

51 Int. Class.[2]: **B 65 D 43/02**
B 65 B 3/04

19 **FEDERAL REPUBLIC OF GERMANY**

GERMAN PATENT OFFICE

DE 27 14 919 A1

11 Disclosure specification 27 14 919

21 File number: P 27 14 919.5
22 Application date: 04/02/77
43 Disclosure date: 10/27/77

30 Joint priority:
32 33 31 04/12/76 Austria A2659-76

---

54 Title: Container and method to fill said container.

71 Applicant: Schöller Lebensmittel KG GmbH & Co., 8500 Nürnberg;
Alpla-Werke, Alwin Lehner oHG, Vienna

74 Representative: Holzmann, A. Attorney at law, 6240 Königstein

72 Inventor: Feind, Richard, Vienna

Search request filed according to Paragraph 28a PatG.

Patent claims:

1. A container, particularly for paste-like substances, such as ice, mustard, jelly, syrup or similar, consisting of a bottom section and of a cover section that can be removed or separated from it, characterized by the fact that closure segments formed by an arrangement of slots are provided in the cover section.

2. A container in accordance with claim 1, characterized by the fact that the slot arrangement is formed by at least two and preferably three or four slots that meet at one point.

3. A container in accordance with claims 1 or 2, characterized by the fact that the slot arrangement is formed by two slots intersecting at the center and preferably at a right angle.

4. A container in accordance with one of claims 1 through 3, characterized by the fact that the slots are of equal length.

5. A container in accordance with one of claims 1 through 4, characterized by the fact that all slots are straight.

6. A container in accordance with one of claims 1 through 5, characterized by the fact that the closing segments touch each other along the slots.

7. A container in accordance with claims 1 through 6, characterized by the fact that the slots are arranged in an enclosure possibly formed by a stiffener for the cover section.

8. A container in accordance with claims 1 through 7, characterized by the fact that the closing segments are thinner than the cover section.

9. A container in accordance with claim 7 or 8, characterized by the fact that the enclosure is round.

10. A container in accordance with one of claims 1 through 9, characterized by the fact that the end of the closing segments located between the ends of two adjacent slots is circular.

11. A container in accordance with one of claims 1 through 10, characterized by the fact that the closing segments have a bending edge located between the ends of two adjacent slots.

12. A container in accordance with one of claims 7 through 11, characterized by the fact that the enclosure has a polygonal form that is determined by the number of slot ends.

13. A container in accordance with claim 12, characterized by the fact that the edges of the polygon form bending edges.

14. A container in accordance with one of claims 1 through 13, characterized by the fact that stiffeners are formed onto the closing segments along the slots.

15. A container in accordance with one of claims 1 through 14, characterized by the fact that the slot arrangement is located in a bowed or outward curving part of the cover section.

16. A container in accordance with one of claims 1 through 15, characterized by the fact that the segments match the form of the cover section and possibly have the same surface curvature.

17. A container in accordance with one of claims 1 through 16, characterized by the fact that the closing segments point inward.

18. A container in accordance with one of claims 1 through 17, characterized by the fact that the closing segments have a concave curvature.

19. A container in accordance with one of claims 1 through 18, characterized by the fact that the container is made of a plastic material and particularly of soft PVC.

20. A container in accordance with one of claims 1 through 19, characterized by the fact that the closing segments are made of a flexible plastic, particularly of soft PVC.

21. A container in accordance with one of claims 1 through 20, characterized by the fact that the bottom section and cover section exhibit the shape of a fruit, such as an orange, lemon, banana, strawberry, tomato or similar.

22. A container in accordance with one of claims 1 through 21, characterized by the fact that the bottom section is connected to the cover section with the help of a tear-off closure, screwed closure, bayonet closure, snap-on closure or snap-in closure.

23. A process for the filling of a container in accordance with one of claims 1 through 22, characterized by the fact that a filler tube to fill the desired substance is inserted after the formation or connection between cover section and bottom section through the cover section opening that is covered by the closing segments while simultaneously bending the closing segments inward, and that the filler rod/tube is withdrawn after filling and the flexible closing segments return to their original position.

Vienna, 04/12/1976

Schöller Lebensmittel KG-GMBH & Co.
and Alpla-Werke, Alwin Lehner OHG
By:
/Signed/

The invention concerns a container, particularly a container for pasty substances, such as ice, mustard, jelly, syrup or similar, in which case said container has a bottom section and a cover section that can be removed or separated from it.

Such containers are generally known. However, filling and closing of these containers is difficult, particularly when this requires tight covers or screw caps. The bottom and cover section are manufactured separately when making the container; the bottom section is then filled and the cover section is screwed-on or attached, in which case this can pose problems, since the bottom section is already filled.

In accordance with the invention, this disadvantage is prevented by the fact that the cover section of a container of the above-described type is fitted with closing segments formed by a slot arrangement. After the manufacture or after connecting the bottom and cover section, the filling of such a container can be achieved by inserting a filler tube in the opening covered by the closing segments to fill the container with the desired substance. Accordingly, there is no longer a need to attach the cover to the filled bottom section.

The process in accordance with the invention to fill such a container of the above-described type is thus characterized by the fact that a filler tube to fill the desired substance is inserted in the opening covered by the closing segments while simultaneously bending them inward after the manufacture or after connecting the cover section to the bottom section, and that the filler tube is withdrawn after the filling process and the flexible closing segments return to their original closing position.

When the filler tube is inserted into the container's inside area, the closing segments are bent inward, rest against the filler tube and yet permit the air to escape while filling the container with the desired substance. After withdrawing the filler tube, the closing segments return to their original position and form a closure that matches the form of the cover i.e., when they were indeed designed to match the cover's form.

It is possible to design such a closing segment with the help of two slots that meet at one point. This would create a triangular or sector-like closing segment that is easy to fill with a round or also a triangular filler tube.

However, it may also be appropriate to have the closing segments consist of a slot arrangement made of two crossing slots that may be of equal length and may intersect each other at their center points and at an angle of 90E. The slots may be of an equal length and may be straight or curved. The closing segments may touch each other along the slots to affect a container closure.

In a preferred manner, the closing segments are thinner than the other container components and particularly thinner than the cover section to achieve good elasticity.

To prevent tearing of the slots during filling with the filler tube, it is appropriate to enclose the closing segments with an enclosure that may be stronger or more solid than the rest of the cover section. The enclosure may be polygonal, in which case the end points are determined by the slot ends. The polygon edges may serve as the bending edges for the closing segments.

In relation to the cover section surface, it is basically also possible to arrange the closing segments flush with the surface or recessed in relation to the surface, in which case they may also point inward and may exhibit a concave curvature.

In a preferred manner, such closing segments are arranged on containers made of a plastic material and particularly of PVC, since this material exhibits sufficient elasticity to let the closing segments return to their original position after they are bent.

The application of the described closing segments is possible in an advantageous manner when the container has the form of a fruit, such as an orange, lemon, strawberry, tomato or banana, since complicated filling of such containers is avoided and since such a closing segment arrangement fits well into the surface of such a container or adjusts itself well to it.

The connection between cover and container may consist of a tear-off closure, a screw cap, a bayonet closure or a snap-on closure. These types of closure are suited particularly with respect to the filling and stability of the container.

The invention will be explained in more detail in the following and with the help of the drawing:

Figure 1 shows a three-dimensional view of a container shaped like an orange; Figure 2 shows a top view of the same container; Figure 3 shows a section through the container cover; Figure 4 shows a top view of a container exhibiting a different slot arrangement in the cover; Figure 5 shows a section through a container; Figure 6 shows a section through a cover and Figure 7 shows a bottom view of a cover.

Container 1 shown in Figure 1 is shaped like an orange, i.e., it is spherical. It consists of bottom section 2, on which rests cover section 3. Cover section 3 is fitted with an arrangement of slots 4 that form the border for closing segments 5. Closing segments 5 are shaped like a sector and are bordered by enclosure 6. However, enclosure 6 may be omitted and cover section 3 will then exhibit uniform thickness and appearance.

Figure 2 shows a top view of cover section 3 for container 1, i.e., a top view of the slot arrangement. Tab 7 to remove cover section 3 from bottom section 2 is formed onto cover section 3 that is round in this case. Tab 7 can have any shape, possibly the form of a leaf, and it can also be omitted. Closing segments 5 touch each other along slots 4 to provide a tight closure for the container.

Figure 3 shows a section through cover section 3. Cover section 3 is fitted with enclosure 6 that is recessed in relation to the curvature of closing segments 5 or to the rest of cover section 3.

Figure 4 shows a slot arrangement with three slots 4. However and in the same manner, it is also possible to use a slot arrangement with only two slots 4 that may meet at an angle of 120E and at one point, thus forming a sector-like closing segment with an opening angle of 120E. The number of slots 4 or the angle at which they meet can be adjusted to the existing conditions. The number of slots or closing segments should be increased for plastic materials exhibiting a lower elasticity.

Figure 5 shows a section through a container fitted with cover section 3, in which case cover section 3 is held in place on bottom section 2 with projections 8 and 9 formed at cover section 3 or at bottom section 2. Projections 8 and 9 may run continuously along the whole periphery of cover section 3 and bottom section 2; they may also be arranged at intervals. Cover section 3 is fitted with enclosure 6 exhibiting the thickness of the rest of cover section 3 to prevent it from being noticed. Closing segments 5 are thinner than cover section 3.

Figure 6 shows a section through cover section 3, in which closing segments 5 are concave and point inward.

Figure 7 shows a bottom view of cover section 3, in which case the inside form of enclosure 6 is shaped like a polygon or formed by bending edges 10 that form a polygon; closing segments 5 can be bent about bending edges 10. Furthermore, closing segments 5 are fitted with stiffeners 11 along slots 4 to increase the elasticity of closing segments 5 and to prevent a tearing of the closing segments when inserting the filler tube.

7 Figures

23 patent claims

Number : 2714919
Int. Cl.[2]: B 65 D 43/02
Appl. Date: April 2, 1977
Disclosure Date: Oct. 27, 1977

Filed later

FIG. 1

FIG. 2

FIG. 3

FIG. 4

FIG. 5

FIG. 6

FIG. 7